

Abstract

A drive unit comprises an electric motor 1, a drive unit casing 2 accommodating therein the electric motor, an inverter 3 that controls the electric motor, and a flow passage of a refrigerant that cools the inverter. The inverter is mounted on a heat sink 53 and mounted to the drive unit casing with a space R defined, and the space is communicated to the flow passage of the refrigerant. The heat sink comprises fins 56, and the drive unit casing comprises fins 22, the both fins being apart from each other. Thereby, both a side of the drive unit casing and a side of the heat sink are effectively cooled by heat exchange with a cooling refrigerant in wide areas. Also, the fins are apart from each other whereby direct heat conduction is avoided and efficient cooling is enabled with temperature gradient conformed to heat-resistant temperatures.